

"Kulatunge"). Claims 1, 13 and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kulatunge. Claim 10 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Kinser.

Applicant has amended claims 1, 13, 18, 19, and 20. These amendments are discussed in more detail in the following sections. Support for these amendments may be found in the original claims, and throughout the specification.

Applicant respectfully traverses the Examiner's rejection of claims 1-20. Applicant requests reconsideration of the present claims in view of the foregoing amendments and following remarks.

#### A. Claims 1-3, 5-9, 11-16 and 18

Claims 1, 13, and 18 are independent claims. Claims 2-3, 5-9, and 11-12 depend from claim 1. Claims 14-16 depend from claim 13.

In order to anticipate under § 102, a reference must disclose a product (or process) having each and every element of the claim at issue. MPEP § 2131. In claim 1, as amended, Applicant claims a "method for proactively maintaining a telephone system local loop, the method comprising of: communicating with a communications network and acquiring status information associated with a Digital Loop Carrier and automatically predicting proactive maintenance based upon the status information." Kinser does not describe a method for "automatically predicting proactive maintenance," such as the method claimed by the Applicant.

Kinser fails to teach

In the Background of the Invention, Kinser describes the proactive maintenance system cited by the Examiner as a prior art system in which, "Customers are the main source of information about outside plant trouble" and "Cable dispatch centers rely heavily on customer reports to identify sections of plant that need repair." See column 25, lines 6 through 9. The system described in Kinser uses customer information to generate a preliminary proactive request for line maintenance. Once the system determines line maintenance is necessary, a second level inquiry is triggered using the mechanized loop testing (MLT) system. See column 20, lines 55 through 58. Therefore, Kinser uses a two-step analysis, including initiation and verification, in the proactive maintenance method, triggered initially by customer input.

Customer reports  
mechanized loop test

Furthermore, Kinser describes a system that requires ongoing manual processes be performed by a user. Kinser states, "Although PREDICTOR tests some incoming indications automatically, users access MLT from a CRT/keyboard." See column 26, lines 8-12. Therefore, the system described by Kinser requires user input throughout process to augment the proactive maintenance application. Since Kinser does not disclose a product or process having each and every element of claim 1, claim 1, as amended, is patentable.

In Claim 13, the Applicant claims "A method for proactively maintaining a telephone system local loop, the method comprising: communicating with a communications network and acquiring at least one of customer information associated with copper line pairs, service information associated with copper line pairs, and status information associated with a Digital Loop Carrier; storing the acquired information; combining the stored information; and automatically predicting proactive maintenance based upon the combined information." For the reasons stated herein in relation to claim 1, Kinser fails to disclose each and every element of claim 13.

Applicant has amended claim 18 to claim "A computer-readable medium on which is encoded computer program code for proactively maintaining a telephone system; comprising: computer program code for communicating with a communications network and acquiring status information associated with a Digital Loop Carrier; and computer program code for predicting proactive maintenance based upon the status information." For the reasons stated herein in relation to claim 1, Kinser fails to disclose each and every element of claim 18.

For these reasons, Applicant respectfully requests the Examiner to remove the rejection of independent claims 1, 13, and 18. Since claims 2-3, 5-9, and 11-12 depend from claim 1, and claim 1 is patentable, claims 2-3, 5-9, and 11-12 are patentable as well. In addition, since claims 14-16 depend from claim 13, and claim 13 is patentable, claims 14-16 are patentable as well.

**B. Claims 4, 17 and 19-20**

Examiner rejected claims 4, 17 and 19-20 as being unpatentable under 35 U.S.C. § 103(a) over Kinser in view of Kulatunge. Claim 4 depends from independent claim 1; claim 17 is independent and claims 19-20 depend from independent claim 18. For the reasons stated herein, the Applicant believes that independent claims 1, 17, and 18 are patentable over Kinser in view of Kulatunge, and therefore, claims 4 and 19-20 are patentable as well.

As the Examiner points out, Kinser "fails to teach a dynamic network analyzer." See Office Action Summary, mailed May 17, 2002. One of the criteria for a prima facie case of obviousness is that "the prior art reference (or references when combined) must teach or suggest all the claims limitations." MPEP § 2143. In claim 1, Applicant claims "A method for proactively maintaining a telephone system local loop, the method comprising: communicating with a communications network and acquiring status information associated with a Digital Loop Carrier; and automatically predicting proactive maintenance based upon the status information." In claim 4, applicant claims a method according to claim 1, "further comprising combining the status information with information from a Dynamic Network Analyzer." Neither Kinser nor Kulatunge teaches a method for "automatically predicting proactive maintenance." Therefore, neither Kinser nor Kulatunge teach each and every element of the Applicant's claimed invention. Since neither Kinser nor Kulatunge teach each and every element of the Applicant's claimed invention, claim 1 is patentable. Claim 4 depends from claim 1, and therefore, claim 4 is patentable as well.

In claim 17, Applicant claims "A system for predicting proactive maintenance of a telephone system local loop, the system comprising: a Dynamic Network Analyzer module communicating with a communications network and acquiring Dynamic Network Analyzer information; a Loop Facilities and Control System module communicating with the communications network and acquiring Loop Facilities and Control System information; a Digital Loop Carrier module communicating with the communications network and acquiring Digital Loop Carrier information; a database stored in memory, the database storing the acquired

information; and a processor capable of processing information stored in the database and of generating proactive maintenance.” For the reasons stated herein in relation to claims 1 and 4, Applicant believes that claim 17 is patentable as well.

Applicant has amended claims 19 and 20. Claims 19 and 20 depend from claim 18. Applicant believes that claim 18, as amended, is patentable. Therefore, claims 19 and 20 are patentable as well.

For the reasons stated herein, claims 4, 17 and 19-20 are patentable over Kinser in view of Kulatunge. Accordingly, the Applicant respectfully requests the Examiner to remove the rejection of claims 4, 17 and 19-20 and allow the claims.

### C. Claims 1, 13 and 18

Examiner rejected claims 1, 13 and 18 as being unpatentable under 35 U.S.C. § 103(a) over Kulatunge. Claims 1, 13 and 18 are all independent claims. As stated above, one of the criteria for a prima facie case of obviousness is that “the prior art reference (or references when combined) must teach or suggest all the claims limitations.” MPEP § 2143. The Examiner states, “given the fact that Kulatunge fails to put a restriction on the network type, it would have been obvious to one of ordinary skill to incorporate the teachings of Kulatunge into any network type.” See Office Action Summary, mailed May. 17, 2002. However, as stated in Section B above, Kulatunge does not teach each and every element of the Applicant’s claimed invention.

As stated above, Applicant claims a method for “automatically predicting proactive maintenance.” See claim 1. Kulatunge describes a method in which a network domain expert or administrator must first manually identify logs in which the expert or administrator has an interest. See column 4, lines 65-67. The expert or administrator must next examine the log to filter out “uninteresting” data from the logs. See column 5, lines 5-8. Kulatunge does not teach a method for “automatically predicting proactive maintenance.” Therefore, claim 1 is patentable over Kulatunge. For the same reason, claims 13 and 18 are patentable as well.

**D. Claim 10**

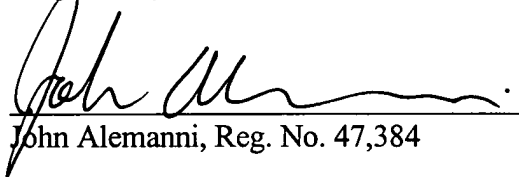
Claim 10 is dependant on claim 1. For the reasons stated herein, claim 1 is patentable, and therefore, claim 10 is patentable as well.

**II. CONCLUSION**

For the reasons stated herein, Applicant respectfully submits that claims 1-20 are allowable and respectfully requests the Examiner to allow all claims. A favorable Office Action is respectfully solicited. The Examiner is invited to contact the undersigned at (336)-607-7311 to discuss any matter related to the application.

Respectfully submitted,

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**Version With Markings to Show Changes Made****Amendments in the Claims**

In accordance with 37 CFR 1.121(c), the following versions of the claims as rewritten by the foregoing amendment show all the changes made relative to the previous versions of the claims.

1. (amended) A method for proactively maintaining a telephone system local loop, the method comprising:  
communicating with a communications network and acquiring status information associated with a Digital Loop Carrier; and  
automatically predicting proactive maintenance based upon the status information.

13. (amended) A method for proactively maintaining a telephone system local loop, the method comprising:  
communicating with a communications network and acquiring at least one of customer information associated with copper line pairs, service information associated with copper line pairs, and status information associated with a Digital Loop Carrier;  
storing the acquired information; combining the stored information; and  
automatically predicting proactive maintenance based upon the combined information.

18. (amended) A computer-readable medium on which is encoded computer program code[product] for proactively maintaining a telephone system; comprising:  
[a computer-readable medium; and]  
computer program code for communicating with a communications network and acquiring status information associated with a Digital Loop Carrier; and  
computer program code for predicting proactive maintenance based upon the status information..

[a Digital Loop Carrier module stored on the medium, the Digital Loop Carrier Module coupled to a Digital Loop Carrier over a communications network, the Digital Loop Carrier module acquiring information concerning the Digital Loop Carrier.]

19. (amended) A computer-readable medium[ program product] according to claim 18, further comprising program code for combining the status information with information from a Dynamic Network Analyzer.[ a Dynamic Network Analyzer module stored on the medium, the Dynamic Network Analyzer module coupled to a Dynamic Network Analyzer over a communications network, the Dynamic Network Analyzer module acquiring information concerning the Dynamic Network Analyzer.]

20. (amended) A computer-readable medium[ program product] according to claim 18, further comprising program code for combining the status information with information from a Loop Facilities and Control System.[a Loop Facilities and Control System module stored on the medium, the Loop Facilities and Control System module coupled to a Loop Facilities and Control System over a communications network, the Loop Facilities and Control System module acquiring information concerning the Loop Facilities and Control System.]